

## CLAIMS

- 1 1. Apparatus for managing a software component update on a computer system  
2 with a memory in response to an update request, the apparatus comprising:  
3 a component manager that receives the request, and has a parser that  
4 extracts from the request URL information which identifies the location of a file  
5 containing the software component resources for satisfying the request;  
6 a download manager that receives the URL information from the  
7 component manager and has a file retriever which asynchronously retrieves the  
8 file from the specified location, places the file in a staging area in the memory  
9 and notifies the component manager; and  
10 an install manager that is instructed by the component manager to  
11 asynchronously install the file in the staging area.
- 12 2. The apparatus of claim 1 wherein the file contains an OSD description of the  
13 software component resources.
- 14 3. The apparatus of claim 1 wherein the component manager comprises a security  
15 section that validates the file before installation.
- 16 4. The apparatus of claim 1 further comprising a manifest which contains a list of all  
17 software components installed on the computer system.
- 18 5. The apparatus of claim 4 wherein the component manager comprises a  
19 mechanism that responds to the request by checking the manifest to ascertain  
20 whether the requested software component is already installed on the computer  
21 system.

- 1 6. The apparatus of claim 1 wherein the component manager comprising a polling  
2 mechanism that periodically polls component locations to locate new component  
3 versions.
- 1 7. The apparatus of claim 1 wherein the software components include system  
2 components that are required for operation of the apparatus and application  
3 components that are not required for operation of the apparatus and wherein the  
4 apparatus further comprises a system component manager that receives  
5 requests for system components and a system component installer that is started  
6 by the system component manger.
- 1 8. The apparatus of claim 7 wherein the system component installer comprises a  
2 system controller that shuts the system component manager down before  
3 installing in-use components.
- 1 9. The apparatus of claim 8 wherein the system controller comprises a mechanism  
2 for restarting the system component manager after system components have  
3 been installed.
- 1 10. The apparatus of claim 1 wherein the component manager comprises an  
2 activation factory for activating installed software components.
- 1 11. A method for managing a software component update on a computer system  
2 with a memory in response to an update request, the method comprising:  
3 (a) parsing the request to extract from the request URL information which  
4 identifies the location of a file containing the software component  
5 resources for satisfying the request;

- 6 (b) using the URL information to asynchronously retrieve the file from the  
7 specified location;
  - 8 (c) places the file in a staging area in the memory; and
  - 9 (d) asynchronously installing the file in the staging area.
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- 1 12. The method of claim 11 wherein the file contains an OSD description of the  
2 software component resources.
  - 1 13. The method of claim 11 wherein step (c) comprises validating the file before  
2 installation.
  - 1 14. The method of claim 11 further comprising:  
2 (e) listing all software components installed on the computer system in a  
3 manifest.
  - 1 15. The method of claim 14 wherein step (b) comprises checking the manifest to  
2 ascertain whether the requested software component is already installed on the  
3 computer system before retrieving the file.
  - 1 16. The method of claim 11 further comprising:  
2 (f) periodically polling component locations to locate new component  
3 versions.
  - 1 17. The method of claim 11 wherein the software components include system  
2 components that are required for operation of the apparatus and application  
3 components that are not required for operation of the apparatus and wherein the  
4 method further comprises:

5 (g) installing system components with a separate system component  
6 manager that receives requests for system components and a separate  
7 system component installer that is started by the system component  
8 manger.

1 18. The method of claim 17 wherein step (g) comprises shutting the system  
2 component manager down before installing in-use components.

1 19. The method of claim 18 wherein step (g) further comprises restarting the system  
2 component manager after system components have been installed.

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20. The method of claim 11 further comprising:  
(h) activating installed software components with an activation factory.

21. A computer program product for managing a software component update on a  
computer system with a memory in response to an update request, the computer  
program product comprising a computer usable medium having computer  
readable program code thereon, including:

program code that parses the request to extract from the request URL  
information which identifies the location of a file containing the software  
component resources for satisfying the request;

program code that uses the URL information to asynchronously retrieve  
the file from the specified location;

program code that places the file in a staging area in the memory; and

program code that asynchronously installs the file in the staging area.

1 22. The computer program product of claim 21 wherein the file contains an OSD  
2 description of the software component resources.

- 1 23. The computer program product of claim 21 wherein the program code that places  
2 the file in a staging area in the memory comprises program code that validates  
3 the file before installation.
- 1 24. The computer program product of claim 21 further comprising program code for  
2 listing all software components installed on the computer system in a manifest.
- 1 25. The computer program product of claim 24 wherein the program code that uses  
2 the URL information to asynchronously retrieve the file from the specified location  
3 comprises program code that checks the manifest to ascertain whether the  
4 requested software component is already installed on the computer system  
5 before retrieving the file.
- 6 26. The computer program product of claim 21 further comprising program code that  
7 periodically polls component locations to locate new component versions.
- 1 27. The computer program product of claim 21 wherein the software components  
2 include system components that are required for operation of the apparatus and  
3 application components that are not required for operation of the apparatus and  
4 wherein the computer program product further comprises program code that  
5 installs system components with a separate system component manager that  
6 receives requests for system components and a separate system component  
7 installer that is started by the system component manger.
- 1 28. The computer program product of claim 27 wherein the program code that  
2 installs system components with a separate system component manager and a

3 separate system component installer comprises program code that shuts the  
4 system component manager down before installing in-use components.

1 29. The computer program product of claim 28 wherein the program code that  
2 installs system components with a separate system component manager and a  
3 separate system component installer further comprises program code that  
4 restarts the system component manager after system components have been  
5 installed.

1 30. The computer program product of claim 21 further comprising program code that  
2 activates installed software components with an activation factory.

3 31. A computer data signal embodied in a carrier wave for managing a software  
4 component update on a computer system with a memory in response to an  
5 update request, the computer data signal comprising:

6 program code that parses the request to extract from the request URL  
7 information which identifies the location of a file containing the software  
8 component resources for satisfying the request;

9 program code that uses the URL information to asynchronously retrieve  
10 the file from the specified location;

program code that places the file in a staging area in the memory; and

program code that asynchronously installs the file in the staging area.

1 32. Apparatus for managing a software component update on a computer system  
2 with a memory in response to an update request, the apparatus comprising:

3 means responsive to the request, for parsing the request to extract from  
4 the request URL information which identifies the location of a file containing the  
5 software component resources for satisfying the request;

6 means for receiving the URL information from the component manager  
7 and asynchronously retrieving the file from the specified location, placing the file  
8 in a staging area in the memory and notifying the parsing means; and  
9 means cooperating with the parsing means for asynchronously installing  
10 the file in the staging area.

1 33. The apparatus of claim 32 wherein the file contains an OSD description of the  
2 software component resources.

1 34. The apparatus of claim 32 wherein the parsing means comprises means for  
2 validating the file before installation.

35. The apparatus of claim 32 further comprising a manifest which contains a list of  
all software components installed on the computer system.

36. The apparatus of claim 35 wherein the parsing means comprises means  
responsive to the request for checking the manifest to ascertain whether the  
requested software component is already installed on the computer system.

37. The apparatus of claim 32 wherein the parsing means comprises means for  
periodically polling component locations to locate new component versions.

1 38. The apparatus of claim 32 wherein the software components include system  
2 components that are required for operation of the apparatus and application  
3 components that are not required for operation of the apparatus and wherein the  
4 apparatus further comprises a system component manager that receives  
5 requests for system components and a system component installer that is started  
6 by the system component manger.

- 1 39. The apparatus of claim 38 wherein the system component installer comprises  
2 means for shutting the system component manager down before installing in-use  
3 components.
- 1 40. The apparatus of claim 39 wherein the system controller comprises means for  
2 restarting the system component manager after system components have been  
3 installed.
- 1 41. The apparatus of claim 32 wherein the parsing means comprises means for  
2 activating installed software components.